

Conference Abstract

Bringing Nomenclature Back Into the Lamplight

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Abstract

Taxonomy *sensu lato* is lately regaining some of its previous prominence in many biodiversity information-related activities and projects, notably for the needed taxonomic backbone in the EU Research Infrastructure Distributed System of Scientific Collections ([DiSSCo](#)) (Woodburn et al. 2022), or in training programs such as Transforming European Taxonomy through Training, Research, and Innovations ([Tettris](#)). However, the increased visibility has yet to happen for α -taxonomy, which is focused on performing revisions and describing and naming new species. The so-called taxonomic impediment (Engel et al. 2021) remains acute, with fewer and fewer experts available for a wide range of taxa, and a progressive erosion of the specialized expertise needed to document biodiversity.

When describing a new species or revising a taxon, respecting the naming conventions governed by the official nomenclatural Codes is essential. There are five Codes currently acknowledged, such as the [ICN](#) — International Code of Nomenclature for algae, fungi, and plant, the [ICZN](#) — International Code of Zoological Nomenclature, [ICNP](#) — International Code of Nomenclature of Prokaryotes, [ICNCP](#) — International Code of Nomenclature for Cultivated Plants and [ICTV](#) Code — International Committee on Taxonomy of Viruses. However, the complexity of the Codes and the long learning curve can act as a barrier, discouraging early career scientists from engaging in α -taxonomy.

Modernising or introducing changes to the existing Codes also involves very strict and relatively lengthy procedures, making it difficult to keep up with technological changes. To overcome these issues, and find common ground, Biodiversity Information Standards ([TDWG](#)) (with the support of the TDWG Partnerships and Fundraising Sub-Committee) and the ICZN (International Commission on Zoological Nomenclature) signed a Memorandum of Understanding (MoU). The document is available on the [TDWG website](#)^{*1}.

The ultimate goal of this MoU is to incorporate correct terminology for zoological nomenclature into TDWG standards with appropriate controlled vocabularies and definitions. It also intends to explore how nomenclature, alongside taxonomy, can be incorporated into biodiversity informatics research projects to attract a new generation of α -taxonomists, and reconnect with the roots of TDWG. This will involve developing tools and applications and channel the use of software and AI to support new species descriptions and revisions that comply with the Codes of nomenclature. It should also involve organising training sessions dedicated to nomenclatural concepts and encouraging the development of enriched taxonomic publications. Another priority is to strengthen mentoring networks so that early-career researchers can learn directly from experienced taxonomists, ensuring that knowledge of best practices is passed on. This expended to all nomenclatural codes beyond the zoological example discussed here.

A coordinated effort between nomenclatural authorities and biodiversity informatics specialists is essential to safeguard and advance online taxonomy. By combining robust standards, innovative technologies, and targeted capacity-building, the community can ensure accurate and efficient species documentation. These actions will hopefully inspire new generations to explore, describe, and protect world's diversity.

Keywords

taxonomy, modernisation, memorandum of understanding, partnership

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Conflicts of interest

The authors have declared that no competing interests exist.

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Endnotes

*1 <https://static.tdwg.org/documents/iczn-tdwg-mou.pdf>